

CLAIMS

1. Process for separating NH_3 from a mixture containing NH_3 , CO_2 and H_2O which comprises an NH_3 rectification step carried out in an NH_3 separation device to which one or more streams containing NH_3 , CO_2 and H_2O , including the mixture, are fed, with a stream consisting substantially of gaseous NH_3 being formed in the NH_3 separation device, separated from the mixture and discharged, characterized in that a condensation step is carried out on at least one of the stream consisting substantially of gaseous NH_3 or the one or more streams containing NH_3 , CO_2 and H_2O supplied to the NH_3 separation device, in which at least a part of the existing CO_2 is converted to a liquid phase.
2. Process according to claim 1, in which the condensation step is carried out by cooling the stream to be condensed and/or bringing it into contact with an absorbing medium.
3. Process according to claim 1 or 2, the process further comprising, in order to separate CO_2 and H_2O from the mixture:
- a CO_2 rectification step, which is applied in a CO_2 separation device to the mixture coming from the NH_3 separation device while a stream coming from a desorption device is supplied, with a stream consisting substantially of CO_2 being formed in the CO_2 separation device and being separated from the mixture, and
 - a desorption step, which is applied in the desorption device to the mixture coming from the CO_2 separation device, with a stream consisting substantially of H_2O being formed and being separated from the mixture, after which the mixture is returned to the NH_3 separation device and/or the CO_2 separation device.
- in which the condensation step is carried out on the stream consisting substantially of gaseous NH_3 from the NH_3 separation device and/or on at least a part of the stream that comes from the desorption device and that is supplied to the NH_3 separation device.
4. Process according to any one of claims 1-3, in which the condensation step is carried out on the stream consisting substantially of gaseous NH_3 from the NH_3

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separation device in a submerged condenser while an aqueous stream and/or liquid NH_3 is supplied as absorbing medium.

5. Process according to claim 4, in which after the condensation step an absorption step is applied to the stream consisting substantially of gaseous NH_3 , in which
5 the said stream is brought into contact with liquid NH_3 .
6. Process according to any one of claims 1-3, in which the condensation step is carried out as a partial condensation step, by means of indirect cooling with a cooling medium, on the stream that comes from the desorption device and that is supplied to the NH_3 separation device.
- 10 7. Process according to claim 6, in which the mixture present in the NH_3 separation device is used as cooling medium in the partial condensation step.